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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,688	03/03/2005	Kazuo Kohmura	MITSP101US	5294
23623	7590	04/14/2009		
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CLEVELAND, OH 44114				
EXAMINER				
MOORE, MARGARET G				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
04/14/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/526,688

Applicant(s)

KOHMURA ET AL.

Examiner

Margaret G. Moore

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4, 6-8, 15, 16, 18, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6-8, 15, 16, 18, 20, 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. Claims 1, 3, 6 to 8, 15, 18, 20 and 21 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weidman et al.

In view of applicants' amendment, the Examiner has changed this rejection from an anticipation rejection (made in the previous office action) to a 102/103 rejection based on inherency.

While Weidman et al. do not specifically teach that method in Weidman et al. results in both the outer and inner surface of the porous film are brought into contact with a cyclic siloxane as claimed, the skilled artisan would expect that such a method step inherently and necessarily occurs in the method of Weidman et al.

From MPEP 2112, "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."

In the instant situation, the Examiner notes the following: mesoporous silica is considered to be a silica having a pore size between 2 and 50 nm and tetramethylcyclotetrasiloxane (TMCTS) has a diameter of .87 nm¹. From this the skilled artisan would conclude that TMCTS is sufficiently small such that at least some of the TMCTS used in forming layer 122 of Weidman et al. to come into contact with the inside surface of the porous silica layer. Note too that the molecular weight of TMCTS is within the claimed range and applicants state in their response that the molecular weight of the cyclic siloxane is related to the ability of the siloxane to enter the pores (bottom of page 5 of the response filed 11/19/08).

While applicants state in their response that the plasma process by which the layer 122 in Weidman is formed will increase the molecular weight of TMCTS, they do not provide any support for such an allegation. Even if some molecular weight increase were expected, one would still expect that at least some of the TMCTS would come into contact with the silica pores before molecular weight increase started.

¹ See the bottom left hand column of page 6234 of the Ono et al. journal article cited in PTO-892.

For claim 21, the Examiner notes that since the method as claimed is inherently met by the prior art, it follows that the properties of the resulting film will be the same such that the resulting layer 122, from the process described on the top of column 11, will fall within the claimed range.

2. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weidman et al.

For claims 4 and 16, applicants rely on the alleged patentability of claim 1. Since this is not sufficient, as noted supra, these rejections are maintained.

3. Claims 1, 3, 4, 6 to 8, 15, 16, 18, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

While claim 1 limits the molecular weight of the cyclic siloxane to be in the range of from 70 to 900, it is impossible to have a cyclic siloxane with a molecular weight as low as 70. This confuses the breadth of the claim.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday and Wednesday to Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Margaret G. Moore/
Primary Examiner, Art Unit 1796

mgm
4/9/09